

## Active Recombinant Human LRP1 protein, Fc-tagged

Cat. No. LRP1-653H    Lot. No. (See product label)

### SPECIFICATION

**Product Overview**      Recombinant Human LRP1 Cluster III(Ser2522 - Ile2941) fused with Fc of Human IgG1 (Pro100 - Lys330) at C-terminal was expressed in CHO.

**Species**                      Human

**Source**                        CHO

**ProteinLength**              2522-2941 a.a.

#### Description

LDL receptorrelated protein 1 (LRP1), also known as CD91 and the  $\alpha$ 2macroglobulin receptor, is a type I transmembrane protein in the LDL receptor superfamily. It is expressed on neurons, hepatocytes, adipocytes, vascular smooth muscle cells, fibroblasts, keratinocytes, macrophages, and megakaryocytes. LRP1 is important for the clearance of a large number of circulating molecules involved in fatty acid metabolism and the inhibition of serine proteases. LRP1 also associates, or through intracellular scaffold proteins, with other membrane associated proteins on the same cell. This allows LRP1 to modulate the activity or internalization of PDGFR $\beta$ , NMDA receptor subunits, TGF $\beta$  receptors, Frizzled1, various integrins, and the prion proteinPrPC. Human LRP 1 is N glycosylated and sialylated, and cleaved in the Golgi to produce an 85 kDa transmembrane beta chain, and a 515 kDa alpha chain. Both associate noncovalently, with the beta chain remaining completely extracellular. The alpha chain of LRP 1 contains 31 LDLR class A repeats, 34 LDLR class B repeats, and 22 EGFl like repeats. The LDLR domains are clustered in four regions throughout the protein. Cluster II (aa 786 - 1165) contains one EGFl like and eight LDLR class A

 Tel: 1-631-559-9269    1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

repeats. Cluster II contains binding sites for Apolipoprotein E, LPL, LRPAP/RAP, alpha 2 Macroglobulin, Coagulation Factor VIII light chain, Lactoferrin, PAI1, tPAPAI1 complexes, ProuPA, and TFPI. Within this region, human LRP1 shares 99% aa sequence identity with mouse and rat LRP1. A shed soluble form of LRP1 circulates in the serum and retains ligand binding properties.

**Predicted N Terminal** Ser2522

**Form** Lyophilized from a 0.2 µ filtered solution in PBS.

**Bio-activity** Measured by its binding ability in a functional ELISA. When recombinant human (rh) LRP-1 Cluster III Fc Chimera is immobilized at 50 ng/mL (100 µ/well), the concentration of rhLRPAP that produces 50% of the optimal binding response is found to be approximately 1 - 5 ng/mL.

**Molecular Mass** Predicted Molecular Mass:72.8 kDa (monomer);SDS-PAGE:115-130 kDa, reducing conditions.

**Endotoxin** < 1.0 EU per 1 µg of the protein by the LAL method.

**Purity** >95%, by SDS-PAGE under reducing conditions and visualized by silver stain.

**Stability** Avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.

**Reconstitution** Reconstitute at 500 µg/mL in PBS.

## GENE INFORMATION

 Tel: 1-631-559-9269 1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA



<b>Gene Name</b>	LRP1 low density lipoprotein receptor-related protein 1 [ Homo sapiens ]
<b>Official Symbol</b>	LRP1
<b>Synonyms</b>	APR; LRP; A2MR; CD91; APOER; LRP1A; TGFBR5; IGFBP3R; prolow-density lipoprotein receptor-related protein 1; LRP-1; TbetaR-V/LRP-1/IGFBP-3 receptor; alpha-2-macroglobulin receptor; apolipoprotein E receptor; type V tgf-beta receptor
<b>Gene ID</b>	4035
<b>mRNA Refseq</b>	NM_002332
<b>Protein Refseq</b>	NP_002323
<b>MIM</b>	107770
<b>UniProt ID</b>	Q07954
<b>Chromosome Location</b>	12q13.3
<b>Pathway</b>	Alzheimer's disease, organism-specific biosystem; Alzheimer's disease, conserved biosystem; Binding and Uptake of Ligands by Scavenger Receptors, organism-specific biosystem
<b>Function</b>	apolipoprotein binding; apolipoprotein binding; calcium ion binding

Tel: 1-631-559-9269 1-516-512-3133

Email: [info@creative-biomart.com](mailto:info@creative-biomart.com) Fax: 1-631-938-8127

45-1 Ramsey Road, Shirley, NY 11967, USA